

Zion-Mount Carmel Highway, Co-op Creek Bridge  
Spanning Co-op Creek at milepoint 43.92 State Route 9  
Zion National Park  
Vicinity of Springdale  
Washington County  
Utah

HAER No. UT-39-D

HAER  
UTAH  
27-SPDA.V,  
3D

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD  
Rocky Mountain Regional Office  
National Park Service  
P.O. Box 25287  
Denver, Colorado 80225-0287

# HISTORIC AMERICAN ENGINEERING RECORD

## CO-OP CREEK BRIDGE

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### I. INTRODUCTION

**Location:** Spanning Co-op Creek at milepoint 43.92 on the Zion-Mt. Carmel Highway, State Route 9. Eleven miles from the south entrance of Zion National Park. This bridge is located in the vicinity of Mount Carmel, Kane County, Utah. However, the other structures included in the Zion-Mt. Carmel Highway Complex (HAER No. UT-39) are in the Springdale vicinity, Washington County, Utah.

**Quoted:** Springdale East, Utah

**UTM:** 12/333440/4121940

**Date of Construction:** 1929

**Present Owner:** State of Utah

**Present Use:** Vehicular bridge

**Significance:** The Co-op Creek Bridge was constructed by the Bureau of Public Roads as part of the Zion-Mt. Carmel Highway. The development of the Zion-Mt. Carmel Highway is significant to the development of the National Parks in Utah and Arizona. Access to the four parks in this area, Bryce Canyon, Grand Canyon, Cedar Breaks and Zion National Park was greatly improved with the building of the highway. Each component of the highway system is important as it relates to the development of this area and tourism as a major industry in Utah and Arizona. Due to the rugged terrain in Zion National Park, each bridge and tunnel was integral to the highway's completion.

**Historian:** Julia W. Osborne. Office of Burtch W. Beall, Jr., FAIA, Architect, Salt Lake City, Utah. December 1992.

## II. HISTORY

### A. NEED FOR HIGHWAY

The development of Bryce Canyon, Cedar Breaks, Grand Canyon and Zion National Parks increased tourism in southern Utah and created a demand for better highways. A connecting link between these National Parks was necessary to eliminate a detour of 175 miles<sup>1</sup>.

The problem, as described by Howard Means, Utah State Road Engineer, was the connection between highways 89 and 91. At the time, there were two connecting routes between the highways. The connection to the north of the parks was Bear Valley Road, which ran southeast from Panguitch, over a high summit, to Alton. However, this route was only for travel during the summer, with severe weather conditions making travel impossible in the winter. The southern connection between these two highways was equally undesirable. This connection required traveling through northern Arizona, from Fredonia to Hurricane. According to Means, this route was unacceptable travel for tourists since tourists would have to travel an extra 175 miles in order to visit Zion, Cedar Breaks and Bryce.<sup>2</sup>

The Federal Bureau of Public Roads wished to eliminate the detour, and the search for a connecting link became a priority. In 1923, a study of the area was initiated by the Federal Bureau of Public Roads and the Utah State Road Commission, and with the help of the House Committee for the National Park Service<sup>3</sup>, the determination was made to build the Zion-Mt. Carmel Highway.

### B. DEVELOPMENT OF THE ZION MT. CARMEL HIGHWAY

The rugged terrain of the Zion area was a major obstacle to overcome in the development of the plan to build the Zion-Mt. Carmel Highway. After extensive study by Howard C. Means, it was determined that 25 miles of road should be built between the Park and Mt. Carmel, with 15-1/2 miles of the road outside the Park. The 8-1/2 stretch inside the park cost approximately \$1,500,000<sup>4</sup>. A total of four bridges and two tunnels were constructed in the Park section of the Zion-Mt. Carmel Highway.

### III. CO-OP CREEK BRIDGE

The Co-op Creek Bridge is located at milepoint 43.92 on the Zion Mt.-Carmel Highway. This reinforced concrete girder bridge is 97 feet in length with a 33 foot maximum span length, and a rise of 17 feet at the bridge end. The roadway width is 22 feet, the deck width is 24.8 feet and the deck structure is cast-in-place concrete. Built in 1929, the bridge consists of three steel "T" beams supported by six rectangular concrete piers. The bridge's minimal ornamentation includes an arched railing with continuous cap and recessed exposed aggregate end-penels. Construction required 186-1/2 yards of Class A concrete, 1175 sacks of cement, 82 cubic yards of sand, 164 yards of gravel and 35,174 pounds of reinforcing steel. The designer is listed by the initials J.J.B. on the original drawings<sup>5</sup>. There are 2" x 2" negatives of the original construction drawings on file at Utah Department of Transportation.

There have been no major changes or alterations in the bridge. The bridge is in use even though the status of the bridge is listed as functionally obsolete<sup>6</sup>.

### IV. PROJECT INFORMATION

This Historic American Engineering Record (HAER) recording project was required as mitigation because of the planned replacement of this bridge. Julia W. Osborne, under the direction of Burtch W. Beall, Jr., FAIA, Architect, was responsible for researching and writing histories for Clear Creek Bridge, Co-op Creek Bridge, and the Short Tunnel in Zion National Park. This report was prepared during autumn and winter of 1992. Photography was done by Arnold Thalheimer.

### V. ENDNOTES

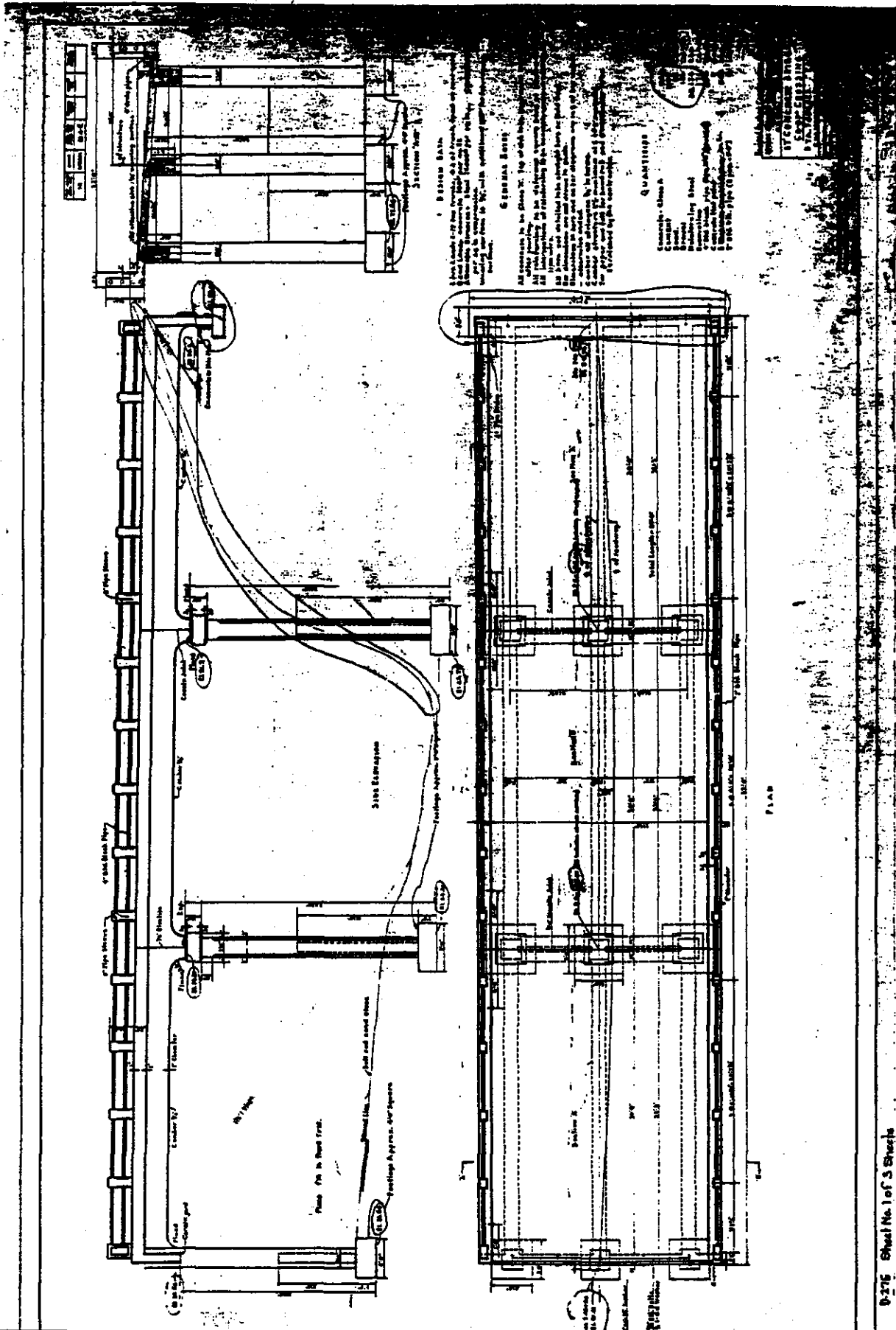
1. Howard C. Means, "Autobiography of Howard C. Means" (Salt Lake City, Utah: Dictated for the files of The Utah State Historical Society, 1947-48).
2. Means, "Autobiography of Howard C. Means".
3. Angus M. Woodbury, A History of Southern Utah and Its National Parks (Salt Lake City, Utah: By the Author, 1950), p. 206.
4. Ibid.

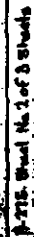
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5. Negatives of Original Construction Drawings, "97' Concrete Bridge Co-op Crossing" (Salt Lake City, Utah: Utah Department of Transportation), Sheet No. 1 of 4.
6. Structural Inventory and Appraisal Sheet, National Bridge Inventory (Salt Lake City, Utah: Utah Department of Transportation, 3/27/92).

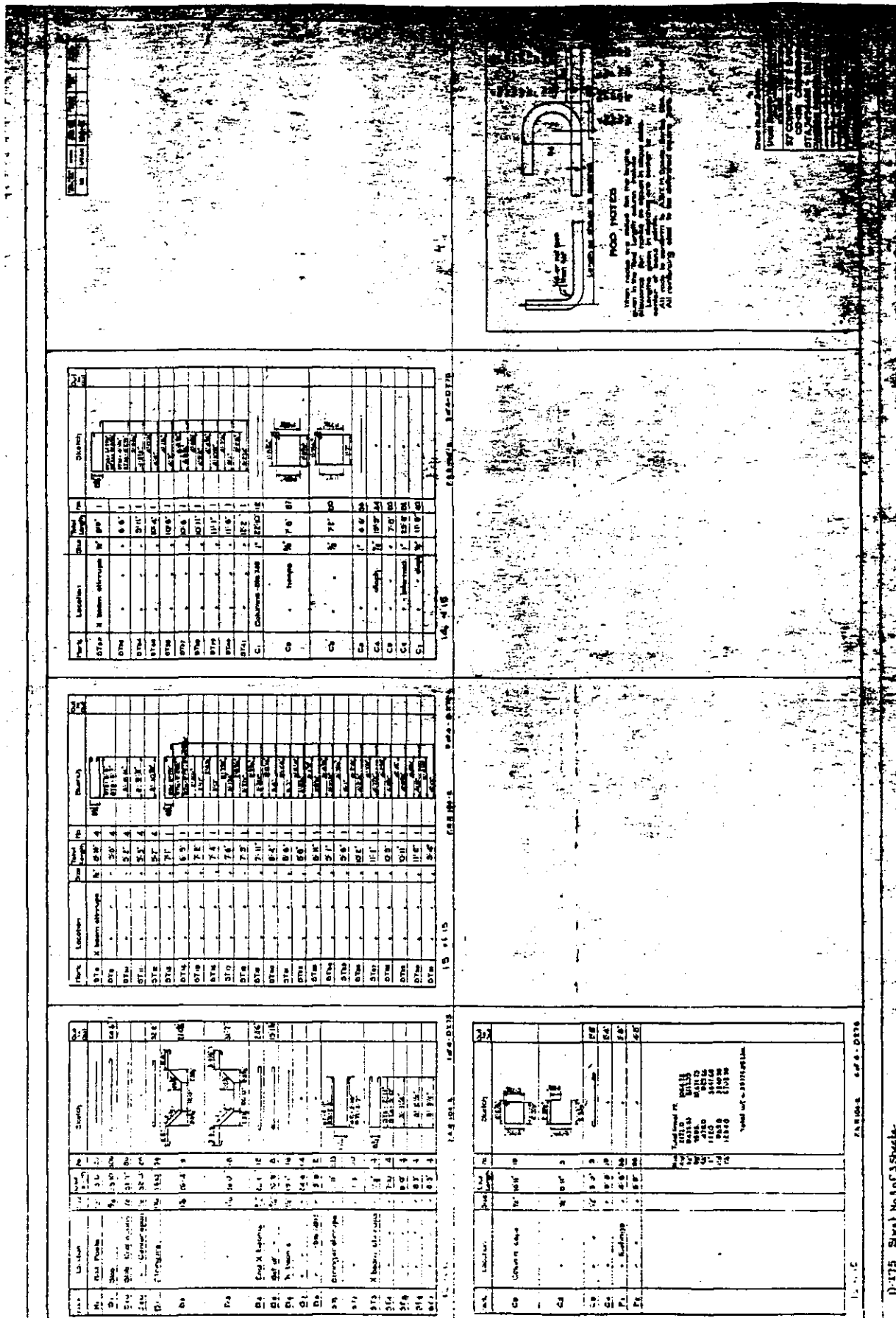


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ADDENDUM TO  
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#### PHOTOGRAPHS

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